



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,191	03/16/2004	Raj Bridgelall	022.0017X1 (1492X1)	5118
29906	7590	12/27/2005	EXAMINER	
INGRASSIA FISHER & LORENZ, P.C. 7150 E. CAMELBACK, STE. 325 SCOTTSDALE, AZ 85251			NGUYEN, PHUNG	
			ART UNIT	PAPER NUMBER
			2632	

DATE MAILED: 12/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/803,191

Applicant(s)

BRIDGELALL ET AL.

Examiner

Phung T. Nguyen

Art Unit

2632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19, 20 and 39-45 is/are allowed.
- 6) ☒ Claim(s) 1-18, 21-38, 46-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8, 10-13, 16, 18, 21-28, 30-33, 36, 38, and 46-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eberhardt et al. (U.S. Pat. 6,107,920) in view of Duan (U. S. Pat. 6,147,606).

**Regarding claim 1:** Eberhardt et al. disclose radio frequency identification tag having an article integrated antenna comprising a first antenna; a second antenna; a transmission line coupling said first antenna and said second antenna (col. 4, lines 17-22). Since the first antenna 24 and the second antenna 26 are interconnected as shown in figures 1 and 2, it is seen that Eberhardt reference does teach that “the transmission line coupling the first antenna and the second antenna” as claimed. Eberhardt et al. do not teach an impedance adjusting circuit coupled to said transmission line and configured for coupling to the RFID transponder. However, using the impedance adjusting circuit is old and known in the art as taught by Duan (col. 2, lines 40-55). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the teaching of Duan in the system of Eberhardt et al. because they both teach a radio frequency identification transponder. It is seen that the teaching of Duan would improve the system of Eberhardt et al. by tuning the tag antenna impedance in order to improve the range of the transponders.

Art Unit: 2632

**Regarding claim 2:** Eberhardt et al. disclose wherein the RFID device is attached to a container (col. 3, lines 62-64).

**Regarding claim 3:** Eberhardt et al. disclose wherein said container is formed of folded fiberboard parts (col. 3, lines 64-67, and col. 4, lines 1-2).

**Regarding claim 4:** Eberhardt et al. disclose wherein said container is a pallet (col. 3, lines 62-64).

**Regarding claim 5:** Eberhardt et al. disclose wherein said first antenna is positioned at a first location on said container and said second antenna is positioned at a second location on said container other than said first location (figures 1 and 2, col. 4, lines 17-25).

**Regarding claim 6:** Eberhardt et al. and Duan do not teach a third antenna coupled to the transmission line as claimed. Since Eberhardt et al. teach the use of the first antenna and the second antenna (col. 4, lines 17-19), it would be obvious to the skilled artisan to add an additional antenna as needed.

**Regarding claim 7:** Eberhardt et al. and Duan do not teach a second transmission line coupling a third antenna and a fourth antenna. However, it would be obvious to have a second transmission lines coupling a third antenna and a fourth antenna in order to extend the use of the device.

**Regarding claim 8:** Duan discloses wherein at least one of said first antenna and said second antenna is a dipole antenna (col. 6, lines 40-43).

**Regarding claim 10:** Duan discloses wherein at least one of said first antenna and said second antenna is a spiral antenna (col. 8, lines 5-10).

**Regarding claim 11:** Eberhardt et al. disclose wherein said transmission line is a common resonant structure that is also configured to form at least one of said first antenna and said second antenna (fig. 2, col. 4, lines 17-38).

**Regarding claim 12:** Eberhardt et al. disclose wherein said container comprising a first wall; a second wall; and a rib interconnecting said first wall and said second wall (col. 3, lines 45-55).

**Regarding claim 13:** Eberhardt et al. disclose wherein the transmission line is interposed between the first wall and the second wall (fig. 15, col. 10, lines 12-32).

**Regarding claim 16:** Duan discloses a tuning circuit coupling said impedance adjusting circuit and said transmission line (col. 2, lines 40-44).

**Regarding claim 18:** Duan inherently teaches a squeeze-on connector configured to couple said impedance adjusting circuit and said transmission line (col. 2, lines 35-55).

**Regarding claim 21:** All the claimed subject matter is already discussed in respect to claim 1 above.

**Regarding claim 22:** Refer to claim 3 above.

**Regarding claim 23:** Refer to claim 4 above.

**Regarding claim 24:** Refer to claim 6 above.

**Regarding claim 25:** Refer to claim 6 above.

**Regarding claim 26:** Refer to claim 7 above.

**Regarding claim 27:** Refer to claim 7 above.

**Regarding claim 28:** Refer to claim 8 above.

**Regarding claim 30:** Refer to claim 10 above.

Art Unit: 2632

**Regarding claim 31:** Refer to claim 11 above.

**Regarding claim 32:** Refer to claim 12 above.

**Regarding claim 33:** Refer to claim 13 above.

**Regarding claim 36:** Refer to claim 16 above.

**Regarding claim 38:** Refer to claim 18 above.

**Regarding claim 46:** Refer to claim 2 above.

**Regarding claim 47:** Eberhardt et al. disclose wherein the first antenna, the second antenna and the transmission line are parts of an integral conductive structure as seen in figures 1 and 2.

**Regarding claim 48:** Eberhardt et al. disclose wherein transmission line directly connects the antennas as seen in figure 2.

**Regarding claim 49:** Refer to claim 47 above.

**Regarding claim 50:** Refer to claim 48 above.

3. Claims 9, 14, 15, 17, 29, 34, 35, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eberhardt et al. in view of Duan and further in view of Platt (U. S. Pat. 5,825,291).

**Regarding claim 9:** Duan discloses the RFID tag antenna may be any of a variety of types (col. 6, lines 54-60). Eberhardt et al. and Duan do not show wherein at least one of said first antenna and said second antenna is a loop antenna as claimed. However, Platt et al. disclose electronic article surveillance system including the loop antenna (col. 2, lines 45-64). Therefore,

Art Unit: 2632

it would have been obvious to the skilled artisan to utilize the technique of Platt et al. in the system of the combination in order to extend the use of the device.

**Regarding claim 14:** Platt et al. disclose wherein the first antenna, the second antenna, and the transmission line are formed at least partially from a pair of twisted wires (fig. 2, col. 5, lines 52-59, and col. 6, lines 10-12).

**Regarding claim 15:** Platt et al. inherently teach wherein a length of said transmission line is adjustable (col. 6, lines 10-12).

**Regarding claim 17:** Refer to claim 14 above.

**Regarding claim 29:** Refer to claim 9 above.

**Regarding claim 34:** Refer to claim 14 above.

**Regarding claim 35:** Refer to claim 15 above.

**Regarding claim 37:** Refer to claim 17 above.

***Allowable Subject Matter***

4. Claims 19, 20, 39-45 are allowed.

***Conclusion***

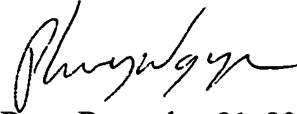
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phung Nguyen whose telephone number is 571-272-2968. The examiner can normally be reached on Monday to Friday from 8:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Wu, can be reached on 571-272-2964. The fax phone number for this Group is 571-273-8300.

Art Unit: 2632

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is 571-272-2600.

Phung Nguyen

A handwritten signature in black ink, appearing to read 'Phung Nguyen', written in a cursive style.

Date: December 21, 2005